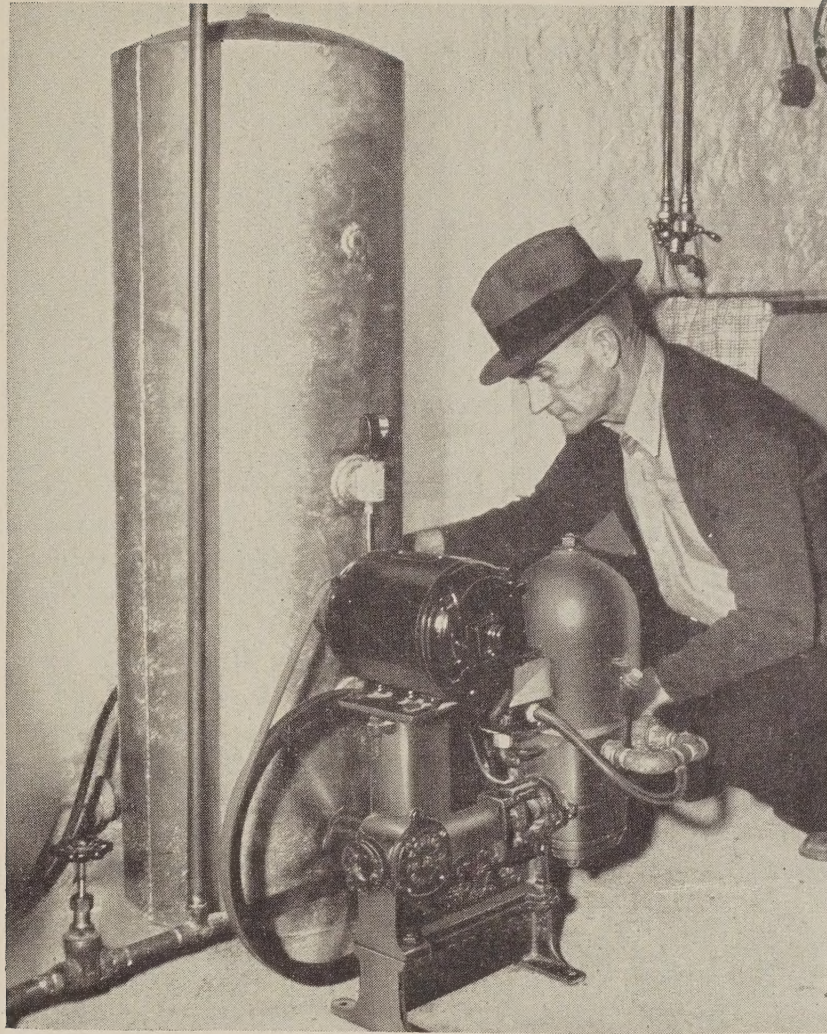
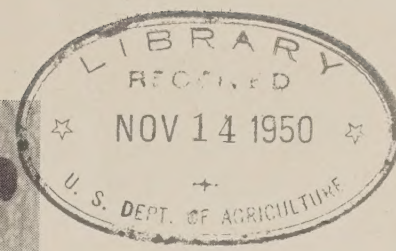


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Do not assume content reflects current scientific knowledge, policies, or practices.





## Care of Your Electric Water System

*"My electric pump reduced my labor to such an extent that I increased my annual broiler production from 2,000 to 28,000. This year I am hoping to double my 28,000 production."*

*—Mrs. R. E. Lovelace, Canton, Ga.*

**A** PUMP is a mighty production weapon when used properly and fully. But pumps, like other pieces of equipment, eventually break down and wear out. Sometimes repairs can be made only by a trained person. But often the user of the pump can do the job himself.

Learn how you can help to assure smooth, efficient operation of your pump and avoid pump breakdowns.

### Here's How a Pump System Works

Let's examine briefly how your pressure system works. Water is pumped into the bottom of your pressure tank, trapping air at the top. This compressed air supplies the pressure that forces the water through the system. To insure proper functioning, a higher percentage of water than of compressed air must be in the tank. The amount of air is controlled automatically on most tanks, by a device on the side of the tank known as an air volume control. Maximum pressure is about 40 pounds. When it is attained, the automatic switch stops the pump. When pressure drops to about 20 pounds, the pump starts again.

Your system will operate just as smoothly as that, if it is in

good condition. It's best not to tinker with it, except to look it over once a month or so for excess water leakage (turn page), to see if the system is lubricated properly (turn page), and—in winter—to forestall freezing.

### Danger Signals

Depend on your water system to warn you when things go wrong. Here are some of the danger signals:

*Pump starts and stops frequently.* This may mean your pressure tank is "water logged." Water under pressure absorbs air and carries it out of the tank, thus destroying the balance between air and water in the tank, and causing many stops and starts. Better ask your service man to examine the air volume control if this condition exists.

If the pump starts and continues pumping for a long interval, check for low water in the well and for leaks in valves and pipes.

*Air from faucets.* The cause of this is usually too much air in the storage tank—just the opposite of the "water-logged" tank. The pump, under some conditions, might be pumping air only instead of water. The air volume control may be clogged or otherwise not functioning.

*No water from the faucet.* Your power may be off or a fuse blown; your motor's belt may have slipped off; the pump may not be drawing water because the water in the well is too low.

## Is Your Pump Doing All It Can?

### Check Your Uses—

- |  |  |
|--|--|
| <input type="checkbox"/> Home                                    | <input type="checkbox"/> Cleaning milk equipment |
| <input type="checkbox"/> Poultry house                           |  |
| <input type="checkbox"/> Drinking cups                           | <input type="checkbox"/> Hog troughs             |
| <input type="checkbox"/> Cleaning barn and other stock buildings | <input type="checkbox"/> Cattle tanks            |
|  | <input type="checkbox"/> Garden irrigation       |
|  | <input type="checkbox"/> Fire protection         |

**Ask your co-op or dealer to suggest other ways your pump can work for you**

*Pump runs but doesn't deliver.* A valve may be worn or not functioning; a suction line may be clogged; there may be an air leak in the pipe from the well; leathers may be worn; pump may need priming. Pumps must be primed after they have been drained or if prime is lost. Ask your repair man to show you the priming plug. If you have a plunger type pump, prime the pump while it is running, and

close the priming plug when you hear the valves opening and closing in the water.

*Leakage.* A small amount of leakage is necessary on many pumps to lubricate the packing in the pump's stuffing box. If more than a few drops of water a minute leak out, tighten the stuffing box nut until no leakage occurs, then loosen the nut a quarter-turn.

*Lubrication.* Follow the directions of your manufacturer carefully in lubricating your pressure system. If freezing temperatures are regularly experienced and the pump is outdoors or in an unheated structure, replace heavy summer oils and greases with a light lubricant in the winter, and vice versa.

*Prevention of freezing.* When freezing weather approaches, your pump must be drained and the pump and pipes covered unless they are properly housed or already set below the frost line. Consult your service man or co-op on how the pump should be protected. A 100-watt lamp in the pump house will help in extreme weather.

*Motors.* Many pump troubles start at your motor and in the wiring to your motor. For example, if a belt is too loose, your pump may not operate at full capacity. Ask your co-op manager for a copy of the REA leaflet, "Care of Your Electric Motor," for suggestions on simple motor maintenance. Make sure your motor and pump pulleys are aligned properly.

### To Prospective Pump Users

Proper installation of pumps and storage tanks with safeguards to prevent freezing, and collection of surface water, and with careful attention to locating the pump at proper vertical and horizontal distances from the source of water supply and the house or barn, is extremely important. Always place suction pipes so that water flows *up* from the source of supply.

Make sure that your pump—especially a deep-well pump—is installed with the assistance of trained persons and that advice of manufacturers is followed throughout. Improper installation will almost certainly take its toll in faulty operation, perhaps years later.

Repair Rule 1. Make certain that the electricity is switched off before making repairs.

Repair Rule 2. Make sure you're right before you go ahead. Ask your pump dealer or repair man to explain thoroughly the various parts of your system.

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